

Form Number : MR1 Reporting of Mass Emissions to Sewer for the period from ...1 January 2023 to 31 December 2023.....

Emission Point	Substance / Parameter	Emission Limit Value	Result ^[1]	Annual mass ^[2]
S1 and S2	Mercury and its compounds	0.005 mg/l	<0.00001mg/l	
S1 and S2	Mercury and its compounds	0.9 g		0 g/m ³
S1 and S2	Cadmium and its compounds	0.01 mg/l	<0.00007mg/l	
S1 and S2	Cadmium and its compounds	0.3 g		0 g/m ³

[1] The result is given as a mass balance calculation, definition as given in condition 6.1.1
[2] The Annual Mass is given as a mass balance calculation, definition as given in condition 6.1.1

Signed
Date: 24 Jan 2024

(authorised to sign as representative of the Operator)

Permit Reference Number : EPR/BV5386IX Operator : GS Yuasa Battery Manufacturing UK Ltd Installation : GS Yuasa Battery Manufacturing UK Ltd

Form Number : R1 Reporting of Waste Disposal for the year 2023

Waste Disposal & Recovery

Waste Description	Disposal Route	Tonnes	Recovery Tonnes
1) Hazardous Wastes			
Lead and lead oxide waste	EnviroWales	832.91	832.91
Other hazardous waste	See below	133.75	8.01
Total hazardous waste		966.66	840.92
2) Non-Hazardous Wastes	See below	93.10	143.29
Total non-hazardous waste		93.10	143.29
TOTAL WASTE	-	1059.76	984.21

Trends in Waste Disposal and Recovery

Year	Parameter	Total Waste	
	Hazardous waste	Tonnes	
	Tonnes	per unit output (1)	per unit output (1)
2015	1088.849	0.0649330	0.0745200
2016	1116.079	0.0649365	0.0742724
2017	1404.312	0.0794441	0.0930663
2018	1133.9434	0.0610909	0.0751587
2019	1046.445	0.0575286	0.0731259
2020	958.54	0.0529232	0.0648250
2021	1136.46	0.0630102	0.0829993
2022	1174.69	0.0696913	0.0843246
2023	966.66	0.0629988	0.0789276

[1] Waste per unit output should be quoted in units of waste produced from battery process / tonnes of battery produced per year.

Operator's comments :

Overall waste output in 2023 has reduced from 2022 due to a reduction in the battery tonnage over the period

Signed
(auth)

Operator)

Date: 24 Jan 2024

Form Number : WU1 Reporting of Water Usage for the year 2023

Water Usage			Trends in Water Usage		
Water Source	Annual Usage (m ³)	Water per unit output [1] (m ³ /t)	Year	Parameter	Water per unit output [1]
Abstraction Borehole	22095 m ³		2018	Total Water usage	4.859827
Mains water	37013 m ³		2019		4.140026
Recycled Effluent	12782 m ³		2020		4.223028
			2021		4.124838
			2022		4.660824
TOTAL WATER USAGE	71890 m ³	4.660824	2023		4.685188

[1] Water per unit output should be quoted in units of total water use / tonnes of battery produced per year.

Operator's comments :
Abstracted water:-

Borehole A = 15262m³, Borehole B = 6833m³, Total Abstracted = 22095m³
Mains Water total = 37013m³

Total water used = 71890 m³

Total water consumption has decreased in 2023 by 6671m³.

Signed

(authorised by the Operator)

Date 24 Jan 2024

Energy Usage			
Energy Source	Energy Usage		CO ₂ Produced (tonnes)
	Quantity	Primary Energy (MWh)	
Electricity *	16575.416 MWh	39780.998	4159.017
Natural Gas	5877.382 MWh	5877.382	1078.418
Renewables	18985.43 MWh	18985.43	0.00
TOTAL	41438.228 MWh	64643.81	5237.435

Trends in Energy Usage			
Year	Parameter		
	Primary Energy usage	CO ₂ produced	CO ₂ per unit output [1]
2019	58576.7598	7238.58	0.3979432
2020	58002.7822	6653.342	0.3673467
2021	57102.116	6495.793	0.3601556
2022	56807.704	5972.410	0.3543279
2023	64643.810	5237.435	0.3413321

* Conversion factor for delivered electricity to primary energy = 2.4

[1] CO₂ per unit output should be quoted in units of total CO₂ produced / tonnes of battery produced per year.

Operator's comments :

CO₂ emissions are calculated using the DEFRA CO₂ emission factors, which includes factors for electricity transmission and distribution. Primary energy has continued to be calculated using the 2.4 conversion factor above.

Energy efficiency continues to be an objective and target for continued improvement. 2022 saw improved energy usage against battery tonnage

Permit Reference Number : EPR/BV53861X Operator : GS Yuasa Battery Manufacturing UK Ltd Installation : GS Yuasa Battery Manufacturing UK Ltd

Form Number : P11 Reporting of Performance Indicators for the year 2023

Annual Production/Treatment

Production of batteries produced per year

15344.10 tonnes

Environmental Performance Indicators

Performance Indicators			Trends in Environmental Performance				
Parameter [1]	Annual Mass	Units	Year	Parameter [1]			
COD	0.02314883	kg/tonne	2016	0.0687224	0.0028735	0.0041387	
Mass of lead released from A1 – A94	0.00235736	kg/tonne	2017	0.1018004	0.0027847	0.0081119	
Mass of lead released to sewer	0.00316082	kg/tonne	2018	0.1076151	0.0023237	0.0123617	
			2019	0.0977397	0.0025575	0.0123617	
			2020	0.757503	0.0015204	0.0051065	
			2021	0.0215811	0.0018092	0.0086988	
			2022	0.0877180	0.0018092	0.0086988	
			2023	0.0231488	0.0025736	0.0031608	

[1] Performance indicators should be quoted in units of parameter / tonnes of battery produced per year

Operator's comments

- COD mass to sewer = 355.168 kg/year / 15344.10 tonnes of battery produced = 0.02314883 kg/tonne.
- Lead mass from stacks = 39.49 kg/year / 15344.10 tonnes of battery produced = 0.0015152 kg/tonne.
- Lead mass to sewer = 48.50 kg/year / 15344.10 tonnes of battery produced = 0.00316082 kg/tonne.
- COD to Sewer: - Annual COD release has been calculated from the average of the monthly figures. Samples were taken in each month of January to December and for factories 2 and 4.
- Stacks:- In 2023 shows an increase in stack emissions calculation as it includes all stacks
- Lead to Sewer:- The annual Lead release for S1 and S2 has been calculated from the average of the monthly GS Yuasa figures recorded for each month of 2023.
- Total Lead to sewer has reduced in 2023.

Signed
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e of the Operator)

Date: 24 Jan 2024